

HYDROGEN STORAGE COMPOSITIONS AND METHODS OF MANUFACTURE THEREOF

ABSTRACT

[0046] Disclosed herein is a method for making a combinatorial library comprising disposing on a substrate comprising silicon, silicon nitride, silicon carbide or silicon boride at least one reactant, wherein the reactants are lithium, magnesium, sodium, potassium, calcium, aluminum or a combination comprising at least one of the foregoing reactants; heat treating the substrate to create a diffusion multiple having at least two phases; contacting the diffusion multiple with hydrogen; detecting any absorption of hydrogen; and/or detecting any desorption of hydrogen.